



ZERO BEAT

<http://hcra.org>

December 2020

Special points of interest:

Next Meeting:

HCRA physical meetings are currently postponed until we have access to the meeting rm at Holyoke Hospital. Meetings will take place on Zoom. See HCRA FB page for link

HCRA is on the web in many places—see the article later in ZB

New Members — Welcome!!

Bill Farrington	KC1VBF
Silas Cutter	KC1BTU
Spenser Lane	KC1TE
Alan Seidner	KC1OCT
Tim Davies	K1RN
Gene Howard	K1WMA
Kevin Washington	no call (yet)

DUES ARE DUE NOW!!

Membership renewal is September—please renew your membership now—Use the easy online renewal at <https://www.hcra.org/online-new-membership-application-and-renewal/> You can even pay online using Paypal

It's time for the virtual Holiday Party!! That's right, online party with guest speakers, live from your own table. So pull up a chair, turn on Zoom, set your plate and drink in front of you, dress up if you like, and join us. No charge!! Like all of our meetings, it will be on the first Friday of the month, at 1930, 730 pm, 0030 UST ;-)

The 10 Meter contest is also this month (12/12—12/13). As always, it coincides with one of the popular meteor (Geminid) shower periods. So that means 10M will periodically open up and provide some possible Dx contacts. This is a great contest for new hams—Tech level can operate SSB from 28.3—28.5. Usually, this is where all the activity is during the contest. So jump in, listen for those sporadic e openings, and have some fun!

Lots more in here—Marcel AA1WH balloon project, Ken KD1KU tells about twitter and Instagram, etc..

73, John N1JIE

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December Meeting

December 4 @ 7:30pm

It's a Virtual Holiday Party!!



We will be meeting on Zoom (link is in Larry's "from the shack"). So decide if you want to dress up, get your meal ready, mix / pour a drink and sit down to celebrate with your fellow Hams!! Join in a few minutes early to chat and catch up, then relax while Fred Hoppengarten, K1VR who is the New England ARRL Director will be the guest speaker. He will talk about what he does, how it benefits each of us and how the club benefits and a Q & A session after. His vice director Phillip Temples K9HI and the WMA section manager Ray Lajoie KB1LRL will also be in attendance.



Dancing will be optional



FROM THE SHACK

LARRY KRAINSON W1AST



December 2020: From the Presidents Ham Shack

Usually by this time, the club Board of Directors is selling tickets to the annual holiday party. With Covid running wild, there will not be a holiday party this year. To offset an in person get together, Gary, AA1UE suggested having a virtual holiday party with a guest speaker. So, that is exactly what we are doing.

On Friday night, December 4th at 7:30 pm, we are having a virtual holiday party with a very special guest speaker. You can eat dinner during the meeting, right in front of your computer, indulge in your drink of choice and participate with all others and listen to Fred Hopengarten; K1VR. Fred is the New England Division Director for the ARRL. He will be talking about what he does for the ARRL and what he can do for you. This would be a great time to collect your ARRL questions to ask.

We will also have Fred's 2nd in command, the Assistant Division director, Phil Temples; K9HI and Ray Lajoie; KB1LRL the Western Mass Section Manager. Many of you will recognize Ray from past visits in person and online as he has joined us in the past. All three will be present to answer all your ARRL questions.

Here is your link to join the Zoom online HCRA December 2020 Virtual Holiday Party:

<https://us02web.zoom.us/j/83720524572?pwd=TVVGOUY0eWwyb1NIY3dzWlRGSG52QT09>

December is the annual ARRL 10m contest. This contest is slightly unusual as it is both CW and SSB in one contest. It's also a contest where everyone competes by themselves AND credits the HCRA with their scores. (We did this for Field Day this past year, too.) This way, the club competes with all the other clubs. Each year, we strive to do better and this year, with everyone home and operating, it should be one of the best 10m contests in recent years.

Save the weekend of December 12-13th for the 10m contest. You can read the full rules here: <http://www.arrl.org/10-meter> plus other need to know information.

Operation is simple. Contact each station just once per mode. You can work both CW and SSB or CW or SSB. The report is 59 plus your state. For me, it would be 59 MA for SSB or 599 MA for CW. Work as many stations as you can and keep track in logging software such as N1MM or N3FJP or similar. That way, the logging program keeps track of scoring for you. Make sure you list your club as: The Hampden County Radio Association. Just like that. Do not abbreviate!

Your log MUST be submitted no later than SEVEN days after the contest is over.

It's times like these that we give thanks to all the good people that are in our lives. I would like to thank the excellent HCRA Board of Directors. The current board is energetic about ham radio and the HCRA. They are filled with exciting information and ideas and help to drive the HCRA forward.

FROM THE SHACK CONT'D

Just last night, we had a BOD (Board Of Directors) meeting on Zoom and every one contributed great ideas for future HCRA activities and meetings. For example, we are going to start up the Mini Share the Knowledge sessions again. These used to be held from 7:00 pm to around 7:20 pm when we met in person before the meeting.

Now, they will be held at the same time, but in a separate Zoom Room. Starting in January, the Zoom meetings will start at 7:00 pm and a topic will be announced beforehand. All interested can join that Zoom Room and learn about that topic. The session will go approximately 20 minutes each. We also hope to have at least one more Zoom Room open for chit chat or to gather before the meeting. We hope to have this all working for the January meeting.

A future project is in the works, to make something cool for everyone's shack. Take that old LCD monitor, add a Raspberry Pi and a small program and turn that spare monitor into your own Geochron look alike clock. This project will save you over \$1850 on the cost of a Ham Radio Geochron. (<https://www.geochron.com/clocks/ham-radio/>). It should be a very cool ham shack accessory. More news on this soon.

Last April (of 2020), there were plans to have a CW reader build session. Then Covid interfered and all plans got first postponed and then canceled. Adding to that, a few board member changes and the cw reader kit got pushed aside. We now have the kits, the parts will soon be sorted and those that paid for the kits, will be contacted and we'll get the kit to you. The directions are already on the HCRA web site (<http://www.hcra.org/tech-projects/cw-decoder/>). Juergen, NV1Q has put together some excellent directions for assembly.

Once those are distributed, there should be a number of kits left over to be sold. The cost is \$25 each. If you are interested in one of the spares, please email me at: w1ast@arrl.net with your name and call. Of course, HCRA members have priority.

Speaking of HCRA members, we're now nearly 4 months into the new HCRA year. We're still hoping that those of you that have not yet renewed will do so ASAP. We need the support of everyone and your membership helps to keep the HCRA running.

Now, as Covid infections start to spike again, the HCRA board is working very hard to come up with new exciting ideas for you to participate in. Ideas that work within social distancing to keep everyone safe. Ideas to spike your interest and curiosity and hopefully give you the incentive to participate. We, the HCRA, are not sitting back silent during Covid. We are safely marching forward, giving our members a reason to be positive and look forward to our exciting and interesting meetings and activities.

I look forward to seeing you on the December 4th meeting and the 10m contest a week later.

I wish you all a Healthy and Happy Holiday Season.

Larry, W1AST


W1AST@arrl.net


SCHEDULED MEETINGS AND SPEAKERS:

 **September** ✓ Show & Tell — members present their projects at Zoom meeting and show them off!!


OCTOBER ✓ Beginning Contesting by Matt W1PY

 **November** ✓ SDR and Flex Radio by Jeff NT1K

 **DECEMBER** The annual HCRA Holiday party—this year a Virtual Party with a guest speaker, Fred K1VR, ARRL New England Division Director, all things ARRL.


JANUARY  2021 Harold N1FTP and the thrill of wallpaper certificates

 **FEBRUARY** 2021 Different Fox Hunting Techniques & Gear

 **MARCH** 2021 ClubLog: What is it, and What can you do with it?

 **April** 2021 To be determined

 **MAY** 2021 To be determined

 **JUNE** 2021 Elections, Field Day and more? Please consider volunteering to run for a Board position—many hands make light work, and HCRA is better with you involved!!

ARRL STUFF

Things are happening in the world of Amateur Radio. ARRL is our advocate for Government, education and organization. I hope everyone that is a member of HCRA is also a member of ARRL.

ARRL 10M Contest

This is a great contest, especially for Tech level hams. 10M is available to tech level from 28.3-28.5. That is actually where most of the contest happens. Last year, HCRA seemed to be having a meeting on 10M during the contest, most contacts were local. But periodically, there would be a brief opening that would get contacts well down into the south-east US, Mexico and the Caribbean. These were likely short openings caused by meteors, causing ionizations. The contest is during a meteor period, so that is part of the fun. 10M has been reported as opening up recently for dx, so this year should be much better.

The contest link is at <http://www.arrl.org/10-meter>. List Hampden County Radio Association as your club affiliation in your log. The biggest thing, as Larry mentioned—SUBMIT THAT LOG! I cannot emphasize that enough. I didn't. Missed it by a few hours (got distracted) and so.... No contest entry :-(

New solar numbers—solar flux hits 100!!!

I'm a fairly new ham. Just over 3 yrs since I got my license. So I have not seen solar flux above 78... and have had to learn, and make dx contacts barefoot with a wire during one of the worst solar lows in decades. It's still a great hobby, and I have learned patience trying to make contacts. I'm even more hampered by the fact I prefer SSB over other modes. Yup—I like to hear a voice, not a deedle deedle. CW is still on my list of things to do... sigh. But it looks like over the next 3 years, it will be like the heyday, barefoot contacts with Asia and Oceania being possible again.

So, we have entered a new solar cycle, and things are already picking up. I have noticed local hams getting pacific rim contacts on digital and cw without expensive antennas and amps. Brings me hope.

The ARRL update can be read at <http://www.arrl.org/news/the-k7ra-solar-update-656>. Nasa also provides a prediction for us at <https://www.nasa.gov/msfcsolar>. Many of us saw the article on our facebook page from the Space Weather News on youtube. https://www.youtube.com/watch?v=L6L-FutZmw8&feature=youtu.be&fbclid=IwAR3nf-KdV1JH7XvAp90_nRLCZfTGzeVC_uQ61XcpOYKaI7DzZWAsUiXC10o

Not sure what we are talking about? Don't feel bad... we all had to learn about it. Look over this brief tutorial from a ham club in the Midwest: [http://heartlandhams.org/sfi-number/#:~:text=Solar%20flux%20is%20measured%20in,the%2010.7%20cm%20flux%20index\).](http://heartlandhams.org/sfi-number/#:~:text=Solar%20flux%20is%20measured%20in,the%2010.7%20cm%20flux%20index).)

To learn more about membership, and how it can help you—<http://www.arrl.org/membership>

Around the world in 80 days—remember that book? Well, Marcel AA1WH has his eyes set on a radio project using a mylar balloon.

AA1WH Pico Balloon Project

I became interested in high altitude balloons about 5 years ago when I heard an interview with Bill Brown WB8ELK on NPR's All Things Considered show. He discussed international flights with "party balloons" which are just ordinary mylar balloons you can buy anywhere. These balloons were carrying ham radio transmitters for tracking. During the interview he mentioned that some flights have succeeded in circumnavigating the globe. I was hooked!

Fast forward to autumn 2017 when I saw my first high altitude balloon glinting in the light of the setting sun. I could not imagine what was so small so as to not be visible but reflecting the sunlight so brightly, just like a mirror in the sky and, it was almost stationary. I grabbed some binoculars and they didn't help much but I finally figured out it had to be a balloon and it was high, real high. This was about the time that Bill showed up on the W5KUB podcast, Amateur Radio Roundtable. Tom Medlin, W5KUB had taken an interest and wanted to get started in ballooning. This served as a re-introduction for me and as inspiration too. Tom shared all the planning for his flight freely on the show. All I had to do was sit back, listen and learn. That brings me to today and the balloon flight(s) that I'm planning.

First, let's discuss what's involved. The balloons I plan to use are ordinary 36-inch diameter mylar and fly at altitudes in excess of 30,000 feet. They will be filled with hydrogen which I will explain in a bit. It will carry a transmitter that will send a signal on 20 meter WSPR over a full length 20 meter dipole antenna. It will also have 2-meter APRS, a GPS, voltage, pressure and temperature sensors and everything will be powered by a solar panel. Here is where it gets interesting, the entire payload will weigh in at under half an ounce! There are kits available for these transmitters but given the time constraints I face of cooperative weather patterns; I intend to buy the tracker fully assembled. The reason we need GPS is that the transmitter must shut down when over Great Britain, Yemen or North Korea. The GPS is programmed to shut everything down when it reaches a preset safety boundary around these countries but it will resume transmitting upon clearing this geo-blocked area. Voltage and pressure are simply for checking on the health of the payload. APRS is for monitoring within a few hundred miles of the balloon and for retrieving it should it come down in an inhabited and friendly region. WSPR is so we can track the balloon out to a 5000-mile range. If luck prevails and we make it over Asia or to the Pacific, these are vast regions without APRS reporting stations but the WSPR will permit tracking in Europe, Australia and other areas. The antenna will be made from an extremely thin bronze wire and trail below the transmitter. While it sounds fragile and ripe for problems, history has proven that it is successful. W5KUB made it around the globe 3 times with one balloon set up like this! And that brings me to the hydrogen. First, helium is safer but terribly expensive. Also, it's almost impossible to find pure helium these days. Hydrogen presents a risk when handling, especially during inflation and transport to the launch site. These risks are understood and measures will be taken to minimize them. The benefit of using hydrogen is that it is more buoyant than helium, less expensive and less prone to leaking through the mylar balloons pores. Remarkably, even though hydrogen is a smaller atom than helium, it behaves differently than expected and is less prone to leaking.

AA1WH Pico Balloon Project (continued)

The last thing I want to discuss is when to launch. The old rule of thumb was to launch in the northern hemisphere during any month that had a “R” in it. This used to reduce the likelihood of encountering hurricanes or severe thunderstorms. However, as we have witnessed in the past several years, this is no longer the case as severe storms now occur throughout the year. The months of February and March however are considered the best bet for reduced severe weather encounters and they provide strong jet stream winds pushing balloons east. Also, come February and March, the days grow longer in the north and the solar panels will be capable of powering the transmitter longer than between November and late January.

There you have it. This is going to be a fun project but it is just the beginning, I hope. The goal is to move up from mylar to Super Balloons which are about 13 feet in diameter and capable of reaching altitudes up to 50,000 feet. Also, I have hopes of involving some STEM students in that project. Ideally, we would build the transmitter and launch during the school year. This first step with mylar balloons is to better understand all the variables involved and increase chances of successfully circumnavigating when we move to the larger balloons. Also, the costs of the mylar balloon and payload are substantially less! I will keep the club up to date on progress and let everyone know when we are launching. You will be invited to observe and encouraged to track!

73,

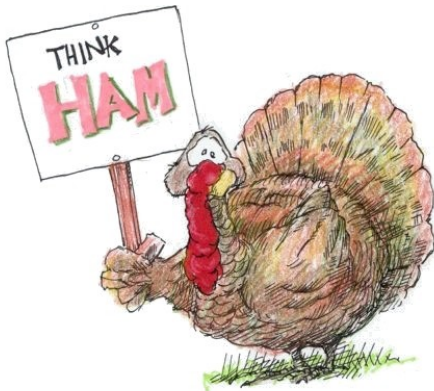
Marcel, AA1WH

This looks like an exciting project, We will all look forward to more info.

Look up W5KUB website about his balloons. There are some commercial payloads for projects like this as Marcel has indicated. Google will get you started. Lots to look forward to!!

A bit ah humah :-)

shamelessly collected from the internet - CW jokes this month



HAM QUIPS



SOMEHOW, CLYDE NEVER FULLY GRASPED THE CONCEPT OF HOW TO ROTATE A BEAM



Copyright © 1999 by Greg Trook, N0UJR



"Harold!!! What are you doing wasting money on more USELESS radio equipment!!!"



What is Twitter?

Twitter is a 'microblogging' social media platform that allows you to send and receive short posts better known as tweets. Tweets can be no-longer than 140 characters and can include images and links to relevant websites and resources.

Twitter users follow other users. Once you follow someone you can see their tweets in your twitter 'timeline'. You can choose to follow people and organizations with similar likes and personal interests as you. The more users you follow

You can create your own tweets or you can retweet information that has already been tweeted by others. Retweeting means that information can be shared quickly and efficiently with a large number of people.

Why use Twitter?

Twitter has become increasingly popular with all types of people such as students, policymakers, politicians and the general public. Many users struggle to understand what Twitter is and how they can use it but it has now become the social media platform of choice for many of it's users. The snappy nature of short tweets means that Twitter is widely used by smartphone users who don't want to read long content items on-screen.

Twitter allows you to:

- Easily promote your interests and hobby's by providing links to items that interest you it allows you to share your with others
- Reach a large numbers of people quickly through tweets and retweets
- Follow the work of others who share the same likes as you
- Share your interests with others who share your love of the hobby
- Keep up to date with the latest news and developments, and share it with others instantly
- Reach out to others who share your likes
- Seek feedback about your latest creation and give feedback to others as well
- Follow and contribute to discussions on events or hobby's for example conferences that you can't attend in person
- Express who you are as a person and build a list of followers who share those same likes, also follow others with similar likes such as ham radio
- By using hashtags you can quickly search and follow others who share similar interests as you
- Log into Twitter using your cell phone, tablet, laptop or PC

These are just a few of the things Twitter can do for you besides other social media platforms. Twitter is similar to typing in real time depending if the other person is also online otherwise they will see what you posted the next time they are online. The same goes for direct messages too.

What is Instagram

Instagram (abbreviated IG) is a social networking app designed for sharing photos, videos and commenting from a smartphone fueled by everyone's obsession with mobile photography. The IG social media platform is now owned by Facebook and includes a feature-limited app for desktops and laptops.

Instagram has become a part of modern day life for so many people. It seems like everyone is on Instagram nowadays, from businesses, news organizations, cultural institutions, celebrities, musicians, photographers and even ham radio operators. Once you have an IG account you can search for items that are of interest to you. Thats where #hashtags come in but more on that later.

Instagram is like a simplified version of Facebook, with an emphasis on mobile use and visual sharing. Like other social media networks, you interact with other users by following them and them following you. You can comment, like, tag and private message other users once you follow them. If you see something you like simply take a pic and post it to IG for all to see.

Why use Instagram?

Like every other type of social media its purpose is to share the things you like (such as ham radio) with others on IG. By searching hashtags you can find specific things other users share on their IG page. By searching the hashtag #HamRadio I found well over 200k posts that used that hashtag in their post so it works both ways their post. One reason for Instagram's popularity is its simplicity. Rather than focusing on a lot of different features, Instagram has one core feature, which makes it especially easy to share photos and to see photos from your friends.

Some things apply to both Social Media platforms such as hashtags and usernames.**What are usernames?**

Twitter's username begins with the @ symbol (@username) and cannot be longer than 15 characters, can contain only alphanumeric characters (letters A-Z, numbers 0-9) and with the exception of underscores it cannot contain any symbols, dashes, or spaces. Instagram has very similar username requirements including beginning with the @ symbol.

What are hashtags?

A hashtag is a combination of letters, numbers, and/or emoji preceded by the # symbol (e.g., #NoFilter). They are used to categorize content and make it more searchable. Hashtags are clickable. Anyone who clicks on an Instagram hashtag or conducts an Instagram hashtag search will see a page showing all the posts tagged with that hashtag. Remember #HamRadio? which has 210,128 posts, but if I change it to #MyHamRadio and get a lonely single post!

Ham Radio Twitter & Instagram

Using ham radio with Twitter and Instagram can be much more than another tool in your online social media tool-belt. Find out what others are excited about in the world of ham radio. Whether it's a brand new HF rig or maybe a home-brewed yagi someone just built. Or possibly an schematic for a project or kit. No matter what it is you can share it with the world or the guy down the street with Twitter and Instagram. Neither are meant to replace Facebook but rather to compliment it. If you have no experience with either then experimenting, reading and following others is good but the easiest way to become more proficient with them is to use them frequently.

Unlike old transmitter tube's, Twitter and Instagram won't break!

Remember, social media is what you put into it!

Here are some links to where you can download the app for both Instagram & Twitter plus if you focus your cell phones camera over the images below and the links you see the app open in your phones or browser.

Download Twitter

<https://twitter.com/download>

Download Instagram for PC's

<https://instagram.en.softonic.com>

Download Instagram for Cellphones

<https://play.google.com/store/apps/>

HCRA Twitter and Instagram Account Links**Instagram**

<https://www.instagram.com/hampdencountyra/>

Twitter

<https://twitter.com/HampdenCountyRA>



(point your cell phones camera at the above image to open the app)

I know this hardly covers what you need to know but with a little practice you might get a little bit more out of both of these social media platforms than you even expected in the beginning. If I can do it then anyone can!

73, Ken - KD1KU

Clublog update: Clublog can be accessed at <https://clublog.org/league.php> Signup is free, and there are a number of ways to lookup information. Give it a try.

This is the clublog with open dates—basically a history from the start of each persons log. As you can see, many of the top members have many years on the air.

Info from 11/28/20

DXCC Leagues

The leagues are rebuilt once per day. Only callsigns active in the last 12 months are included in the league tables. The maximum size of a league is 2000 participants.

☒ No Mode Filter ☐ CW ☐ Phone ☐ Data
☒ Rank by DXCCs ☐ Rank by slots Rank by band: Totals ▼
☒ 160M ☒ 80M ☒ 60M ☒ 40M ☒ 30M ☒ 20M ☒ 17M ☒ 15M ☒ 12M ☒ 10M ☒ 8M
☒ Current entries ☐ Current and deleted ☒ Worked ☐ Confirmed
☐ No Date Filter ☐ 2020 ☐ 2019 ☐ Last 12 months
 Filter by club/continent: HCRA - Hampden County Radio Association ▼

Generate DXCC League

League for HCRA - Hampden County Radio Association

Rank	Callsign	160	80	60	40	30	20	17	15	12	10	6	DXCC ▼	Slots	Range
1	NU1D+1	18	149	9	258	240	329	274	322	231	308	4	335	2149	32 yrs
2	NV1Q+3	27	135	0	180	111	308	257	314	232	255	2	329	1822	41 yrs
3	KK1W+1	135	190	7	258	220	308	275	278	215	232	35	328	2155	44 yrs
4	NF1G	0	155	0	229	247	299	253	252	175	202	43	319	1855	35 yrs
5	W1PY+1	34	115	0	197	54	244	203	239	128	204	7	291	1435	10 yrs
6	KK1X	55	125	50	182	141	200	124	202	42	192	8	251	1343	23 yrs
7	K1VDE	5	59	2	110	51	199	138	150	55	142	3	247	937	19 yrs
8	K1NZ+1 *	113	153	55	154	154	153	157	145	73	57	5	243	1330	9 yrs
9	N1TA+3 *	105	144	15	154	53	200	50	155	8	129	0	235	1055	15 yrs
10	AB1WT	2	32	1	52	4	125	123	125	54	59	1	212	522	5 yrs
11	W1AST+1	2	50	9	100	24	155	104	123	10	120	7	202	725	11 yrs
12	NT1K+2	5	49	2	103	33	154	45	141	47	123	1	159	734	10 yrs
13	N1FTP	0	7	0	50	0	155	45	117	15	109	1	152	522	12 yrs
14	WD1S+2	45	57	1	115	23	145	40	95	11	95	2	175	535	5 yrs
15	W1TRK	0	3	0	11	0	54	0	34	0	1	0	79	113	4 yrs
16	N1JIE	1	5	0	23	2	47	20	5	1	4	1	55	110	3 yrs
17	AB1ZJ	0	0	0	14	0	37	0	0	1	0	0	45	52	4 yrs
18	N1FJ	0	0	0	5	0	19	0	14	3	15	0	43	57	7 yrs
19	KB1VSK	0	2	0	4	0	35	4	1	0	2	0	35	45	4 yrs

You can link to your club here: <https://clublog.org/league.php?club=159>

This is the clublog for 2020. You can see a different order of participants. But also some newer Hams getting active—awesome!

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☒ 160M ☒ 80M ☒ 60M ☒ 40M ☒ 30M ☒ 20M ☒ 17M ☒ 15M ☒ 12M ☒ 10M ☒ 8M
☒ Current entries ☐ Current and deleted ☒ Worked ☐ Confirmed
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Generate DXCC League

League for HCRA - Hampden County Radio Association

Rank	Callsign	160	80	60	40	30	20	17	15	12	10	6	DXCC ▼	Slots	Range
1	NU1D+1	18	149	9	258	240	329	274	322	231	308	4	335	2149	32 yrs
2	NV1Q+3	27	135	0	180	111	308	257	314	232	255	2	329	1822	41 yrs
3	KK1W+1	135	190	7	258	220	308	275	278	215	232	35	328	2155	44 yrs
4	NF1G	0	155	0	229	247	299	253	252	175	202	43	319	1855	35 yrs
5	W1PY+1	34	115	0	197	54	244	203	239	128	204	7	291	1435	10 yrs
6	KK1X	55	125	50	182	141	200	124	202	42	192	8	251	1343	23 yrs
7	K1VDE	5	59	2	110	51	199	138	150	55	142	3	247	937	19 yrs
8	K1NZ+1 *	113	153	55	154	154	153	157	145	73	57	5	243	1330	9 yrs
9	N1TA+3 *	105	144	15	154	53	200	50	155	8	129	0	235	1055	15 yrs
10	AB1WT	2	32	1	52	4	125	123	125	54	59	1	212	522	5 yrs
11	W1AST+1	2	50	9	100	24	155	104	123	10	120	7	202	725	11 yrs
12	NT1K+2	5	49	2	103	33	154	45	141	47	123	1	159	734	10 yrs
13	N1FTP	0	7	0	50	0	155	45	117	15	109	1	152	522	12 yrs
14	WD1S+2	45	57	1	115	23	145	40	95	11	95	2	175	535	5 yrs
15	W1TRK	0	3	0	11	0	54	0	34	0	1	0	79	113	4 yrs
16	N1JIE	1	5	0	23	2	47	20	5	1	4	1	55	110	3 yrs
17	AB1ZJ	0	0	0	14	0	37	0	0	1	0	0	45	52	4 yrs
18	N1FJ	0	0	0	5	0	19	0	14	3	15	0	43	57	7 yrs
19	KB1VSK	0	2	0	4	0	35	4	1	0	2	0	35	45	4 yrs

You can link to your club here: <https://clublog.org/league.php?club=159>

DOTS & DASHES: Things I can't think where to put, but are interesting.

INTERESTING HAM RADIO WEB SITE:

Well, since our new solar cycle is going to change things, especially for us new hams that have only experienced dead bands, Interesting to me is how to learn about it. Here are some places;

NOAA: <https://www.swpc.noaa.gov/products/solar-cycle-progression>, <https://www.swpc.noaa.gov/products/27-day-outlook-107-cm-radio-flux-and-geomagnetic-indices>

ARRL: <http://www.arrl.org/wlaw-bulletins-archive-propagation>

INTERESTING “EVENT”

Meteor showers— still more meteor periods coming!!

Meteor showers are interesting, romantic, awe inspiring on a quiet dark night. But they also do things to the atmosphere—like ionize it for a few moments. This is one of the causes of “Sporadic E” - the ionization of the E layer of the magnetic fields around the Earth. And what this can do is open up 10m and vhf bands to long distance communication.

Geminid mid Dec

Ursid late Dec

There has been increased openings on 10M recently

ARRL Field Day results are published!!

Remember how crazy FD2020 was? Operating in your shack, your yard, or by yourself? Well, amazingly, there were over 1.8 million contacts by nearly 19000 participants! More contacts than last year! So, we still had a Field Day... it was just a bit different.

There was a 1E station (AA3B) that had almost 12000 pts. There were over 6000 class D stations—workin from the shack!!

HCRA had an aggregate score of 10418 pts with 14 participants that listed the club in their log. Pretty good!! For comparison, in 2019: 12248 pts, 23 participants / 2018: 9774 pts / 25 participants. So, we have a pretty good cause to feel good about our efforts!!

Read about it at <https://contests.arrl.org/ContestResults/2020/Field-Day-2020-FinalQSTResults.pdf>

UPCOMING CONTESTS (just a few...)

December—

Dec 12-13	ARRL 10M contest	28mhz	arrl.org/10-meter
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Many more contests listed at: <http://www.arrl.org/contests> or <https://www.contestcalendar.com/contestcal.html>

Don't forget special event stations— <http://www.arrl.org/special-event-stations> These are fun contacts, usually with a special QSL card or certificate.

Special Event Station— not much this month

Dec 7	Pearl Harbor Remembrance Day	qrz.com/db/w5kid
Dec 18-24	120th Anniv 1st wireless voice transmission	qsl via bureau or direct N9EN

Local happenings / Nets

Sundays: 0845: Western Mass Emergency Net 146.94, PL 127.3 - W1TOM/R

First Monday: Southwick Regional RACES Drill, 1845, 146.49 Simplex

Mondays: 1930: HCRA 10m Net 28.375

Tuesdays: 1930-2000: 146.94, PL 127.3 - W1TOM/R - Hampshire County Emergency Net

Wednesdays: 1930: MTARA Info net 146.94, PL 127.3 - W1TOM/R - includes NTS Net

2000: MTARA Swap net: 146.94, PL 127.3 - W1TOM/R

2000: MTARA Simplex Net - starts on 146.94 - PL 127.3, then goes to 146.42 direct (simplex) Usually starts immediately following the swap net.

2100: Weather Net (Roger, K1PAI Net Control), 1st Thursday of every month: 147.090 MHz, All other Thursdays: 147.000, PL 127.3 - W1TOM/R

Join the ARRL or renew your membership!

ARRL members enjoy:

- QST Magazine
- Members-Only Web Services
- Technical Information Service
- Member Discounts
- Outgoing QSL Service
- Continuing Education
- ARRL as an Advocate
- Regulatory Information Branch
- Public Relations for Amateur Radio
- ARRL Field Organization
- ARRL-sponsored contests
- Operating Awards
- Local Clubs
- Amateur Radio Emergency Service
- Hamfests and Conventions
- Volunteer Examiner Coordinator Program



<http://www.arrl.org/membership>

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Club meetings & VE sessions Please contact site / organization to ensure it will meet. Clubs meet on Zoom, VE sessions are being developed.

1st Friday of the month 7:30 PM, HCRA Club Meeting, Virtual meeting on Zoom. Meetings will continue on Zoom until it is safe to meet as a group. <http://www.hcra.org/>

3rd Friday of the month 7:30 PM, MTARA Club meeting, Virtual meeting on Zoom. Meetings are on hold until further notice. <https://mtara.org/>

4th Friday of the month 6:00 PM, Technician, General, and Extra Class License Exams, in-person exams are on hold at present. A virtual exam is being explored. Hosted by the Western Mass VE Team (WMVET). Contact: David Cote, w1fab@arrl.net

Second Monday of the month 7:00 PM, Franklin County Amateur Radio Club meeting, Virtual meeting on Zoom. Meetings will continue on Zoom until it is safe to meet as a group. <http://www.fcara.org/>



**Here is your exciting copy
of Zero Beat!**

**Hampden County Radio Association
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